Coordinated Resource Management and Planning in the Laguna de Santa Rosa

A Report to

Sonoma County Water Agency
and
City of Santa Rosa

by

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1.0 INTRODUCTION

1.1 Purpose. This report summarizes the 12-month process that created the Coordinated Resource Management Plan for the Laguna de Santa Rosa. Public comments about the Plan are summarized, as are other issues not included in the Plan. This report is for anyone who wants background information about the CRMP process or development of the Plan. The Appendices provide additional details and are referenced throughout this report.

1.2 Background. Coordinated resource management and planning (CRMP) is a locally driven process that seeks to achieve compatibility between land and resource uses. It addresses the dilemma of managing areas with multiple-use ownership, conflicting management objectives and requirements, conflicting land use demands, and off-site impacts. Plans developed during the CRMP process are recognized by 15 state and federal agencies, and resulting projects have an advantage in funding and permitting processes.

The CRMP approach is practical and workable. One value of the process is in eliminating traditional jurisdictional lines that otherwise fragment a resource area. This fragmentation has been a barrier in the past to developing a unified view of what the Laguna is and how it can be sustained. We think that the CRMP has successfully brought many stakeholders together to develop shared goals, and has identified important projects that can be accomplished jointly.

The meeting schedule as well as notes from seven Task Force meetings are included in Appendix C. The first meeting concentrated on questions of process and outcomes. Task Force members also shared their individual goals for the CRMP. These goals are summarized in Appendix D. Meetings two through five were instructive, with Task Force members and outside presenters providing information about the Laguna. A list of all materials distributed to Task Force members is in Appendix E. These early meetings also provided information on issues, problems and opportunities that were later considered by the Task Force subcommittees (App. F).

At the conclusion of the fifth meeting, the Task Force selected the following resources to be included in the Coordinated Resource Management Plan:

1. agricultural,
2. biotic,
3. cultural,
4. educational,
5. open space,
6. recreational,
7. water.

Members then divided into five subcommittees, depending on their resource interests, with many serving on more than one subcommittee. During the subcommittee meetings, Task Force members identified the issues related to that resource(s) in the Laguna; selected the issues to be addressed by the Plan; developed long-range goals; and suggested specific projects that would help accomplish those goals. Each subcommittee also defined the area of the Laguna that would be needed to protect its resource. Issues and suggestions discussed at each subcommittee meeting were put into written form and reviewed at the following meeting. Topics were refined through subsequent meetings, and consensus was reached within each subcommittee for its issues, goals and objectives.

The Task Force reviewed the progress of the subcommittees during its sixth meeting. At the seventh meeting, Task Force members approved long-range goals and specific projects proposed by the subcommittees. A sixth subcommittee was formed to look at monitoring issues. During the final two Task Force meetings, members discussed, revised and approved the wording of the Coordinated Resource Management Plan. The Plan represents the consensus by all Task Force members of their shared interests and common goals in the Laguna.

The completed Plan was sent to the statewide CRMP registry by letter dated June 8, 1995. The Plan is designed to be a flexible document, the product of an on-going CRMP process. The Task Force will meet periodically in the future, with its next meeting set for Fall 1996, to review and revise the Plan.

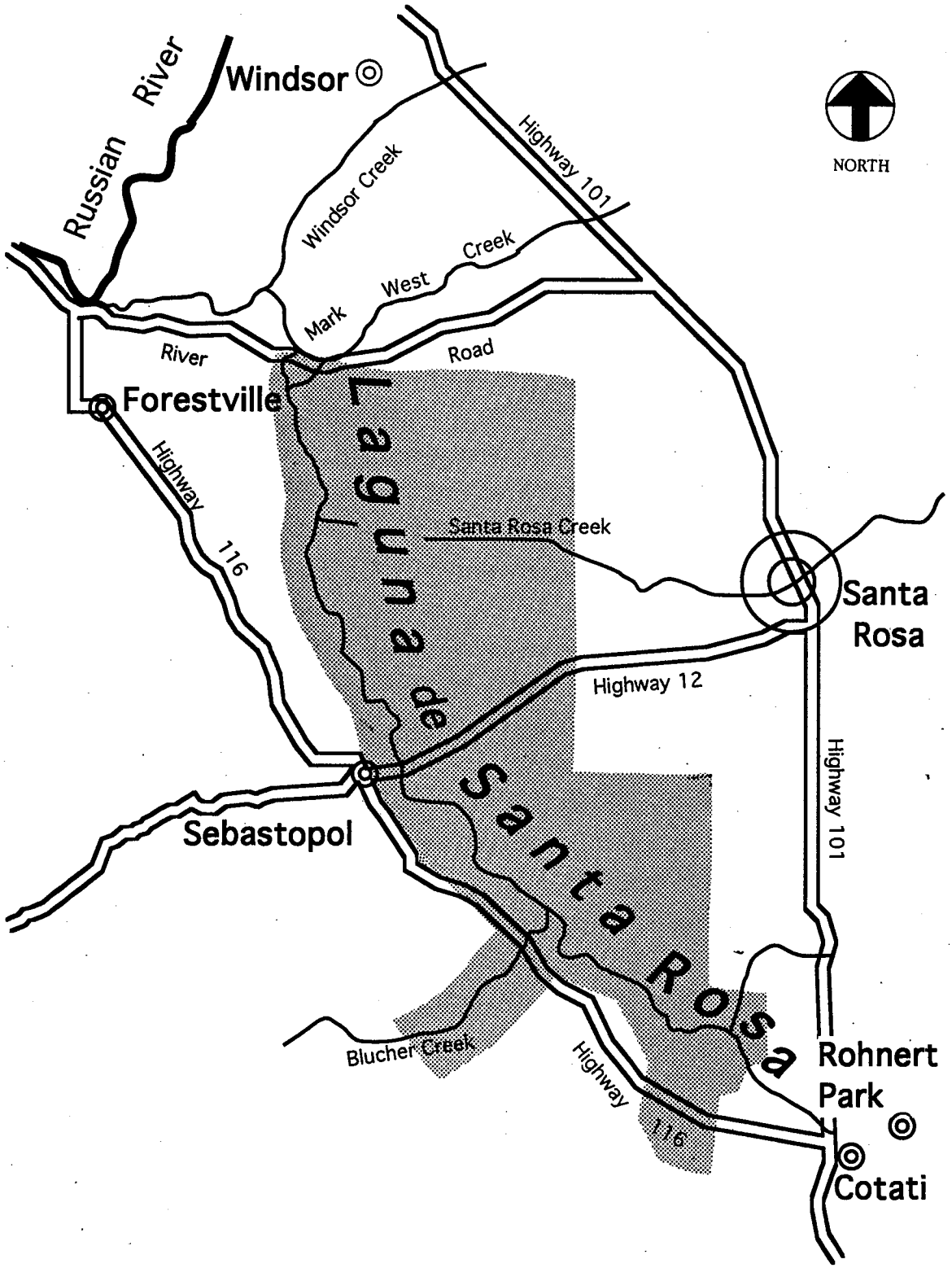

Figure 1. Laguna de Santa Rosa
Coordinated Resource Management Plan (CRMP) Area

4.0 OTHER ISSUES

The Laguna Coordinated Resource Management Plan is limited to goals that are broadly accepted, and to projects that can be done cooperatively and voluntarily. It is not a regulatory document, and contains no mandates. This approach made it easier to achieve agreement among Task Force members—no proposed goals or projects were excluded from the Plan because of lack of agreement. However, we do expect disagreement in implementing the Plan on specific parcels. Unlike regulations that define which uses are acceptable, the Plan addresses whether the scale or intensity of a particular use is appropriate. This calls for a subjective judgment, and there are bound to be lively discussions on a case-by-case basis.

The Plan must be viewed as a work in progress, revised regularly as we learn from our stewardship efforts. Members of the Task Force have identified issues that may be addressed in future versions of the Plan:

— location and timing of winter wastewater discharge point, particularly if discharges increase;

— amount of summertime pumping from the low-flow channel; and maintenance of minimum flows;

— agricultural chemical uses, particularly if intensive farming practices continue to increase;

— management of areas where public access is provided;

— fire suppression in restoration areas; and fire as a management tool;

— trends for higher intensity land uses as a result of increased population;

— groundwater supply, quality and quantity;

— cumulative risk from interactions of multiple toxins in the same exposure pathway;

— basinwide impacts of increased development and stormwater management on water quality and downstream flooding;

— a systematic monitoring program to improve baseline information and identify chronic problems that are the cumulative result of long-term conditions.

5.0 CONCLUSIONS

The purposes of the Laguna Foundation in coordinating the CRMP process were: (1) to bring together as many stakeholders as possible; (2) to develop goals and projects through consensus; and (3) to extend knowledge about the Laguna to a wide and diverse group. We believe all of these purposes have been accomplished.

(1) The Task Force represents many viewpoints. Half of its members are from the private sector, many of them Laguna landowners. Approximately a third of the Task Force is primarily interested in agriculture; another third in environmental protection; and the remainder in other issues such as recreational access. All of the members care about the future of the Laguna, and more than one third of them attended meetings unpaid by any group or organization.

(2) All elements of the plan came out of subcommittee and Task Force meetings, and were unanimously adopted. These goals and projects represent the best ideas on managing our local resources, and are accepted across a broad spectrum of interests. The value of the Plan will be to provide a common "blueprint" for future projects, to measure our individual progress toward the common goals.

(3) The materials sent to more than 40 Task Force members and interested citizens represent an impressive amount of knowledge about the Laguna. Several Task Force members have commented that their original perspective on the Laguna has broadened and their appreciation has increased accordingly.

The success of the CRMP process underscores the need to continue public education and landowner involvement by all agencies and groups involved.

Appendix A

PROPOSAL for a
Coordinated Resource Management and Planning (CRMP) Process, Laguna de Santa Rosa, Sonoma County, California.

Background. CRMP is a locally driven planning process that is designed to achieve compatibility between land and resource uses. It addresses the dilemma of managing areas with multiple-use ownership, conflicting management objectives and requirements, conflicting land use demands, and off-site impacts. Seven state agencies, seven federal agencies and the University of California Extension Division are cooperating agencies, and will participate in the process if requested by local government.

The CRMP approach is practical and workable. There are currently 62 registered CRMP areas in California. These management areas vary in size, based on types of resources, community interests and recognizable physical boundaries. One value of the process is that it crosses traditional jurisdictional and property lines that otherwise fragment a resource area.

The Laguna de Santa Rosa, at one time the second largest freshwater marsh in coastal Northern California, would benefit by a coordinated plan for resource management. The CRMP process is well suited to address the resource issues in the Laguna, and to bring the many stakeholders together to develop shared goals.

Process. The Laguna de Santa Rosa Foundation proposes to initiate a CRMP process in the Laguna. The Foundation is a private, non-profit public benefit corporation that represents a range of viewpoints about the Laguna.

The Foundation will involve individuals and private groups in the process, as well as public agencies, in order to achieve a truly representative plan. Involvement can occur at various levels. The most intense level is the Task Force which shall meet regularly, and will produce the final Coordinated Resource Plan. The next level will be landowners and groups with a direct interest, who cannot attend daytime meetings but wish to be kept informed about the progress of the Task Force. The Foundation will provide information to them through newsletters, presentations at group meetings, and

Appendix B

Potential Stakeholders, Laguna CRMP

I. Federal, state and local public agencies, departments & districts

Environmental Protection Agency
*Natural Resources (Soil) Conservation Service
U.S. Fish & Wildlife Service
Consolidated Farm Services Agency (Agricultural Stabilization & Cons. Service)
U.S. Army Corps of Engineers
National Marine Fisheries Service

*Dept. of Fish and Game
Dept. of Conservation
Dept. of Food and Agriculture
Dept. of Forestry and Fire Protection
*Dept. of Water Resources
State Lands Commission
Coastal Conservancy
*CalTrans
*Regional Water Quality Control Board
Univ. of California Extension

*Gold Ridge RCD
*Sotoyome-Santa Rosa RCD
*Marin-Sonoma Mosquito Abatement District
*Fish & Wildlife Advisory Board
Bay Area Air Quality Management District
Agricultural Commissioner
*Ag. Preservation & Open Space Dist.
*Sonoma County Water Agency
*County of Sonoma
    Parks Dept.
    Planning Dept.
    Public Health
    Public Works
    Sanitation
*City of Santa Rosa
    Dept. of Utilities (Subregional System)
    Dept. of Public Works
    Community Development Dept., Planning Division
    Recreation & Parks Dept.
*City of Rohnert Park
*City of Cotati
*City of Sebastopol

Congresswoman Lynn Woolsey
Congressman Dan Hamburg
Assemblyman Dan Hauser
Senator Mike Thompson

* Task Force member

Coordinated Resource Management and Planning
Laguna de Santa Rosa

Community Outreach Summary
May 3, 1994

At the April 20 meeting, Task Force members stressed the importance of involving Laguna landowners and a diversity of community members in this CRMP process. Following is a summary of actions that have been taken to solicit community participation:

1. Letters of invitation to join the CRMP Task Force. In addition to the public agencies concerned with the Laguna, letters were sent to approximately 100 landowners within the Laguna floodplain, the complete Laguna Foundation mailing list, and every organization and individual we could think of that might be interested. The response postcards included in the letters of invitation had a space for people to write in other organizations or individuals who might be interested. Kim Cordell followed up on each of these. If anyone is interested in seeing the complete list, please let her know.

   The postcards also allowed the respondents to choose if they wanted to join the Task Force, receive regular or occasional updates, or be removed from the mailing list.

2. Meetings. Kim Cordell also attended meetings of local organizations to inform their Boards and members of the CRMP. She will continue with these meetings to help keep organizations up to date.

3. Newspaper. An announcement appeared in the Sonoma Marin Farmer before the first meeting, again inviting landowners to participate in the CRMP. A small press release was also sent to local newspapers following the first meeting, at the request of the Task Force, announcing future meetings and inviting people to join the process. No meeting times were given in this announcement, just dates, in order to not pre-screen people who are unable to attend daytime meetings.

4. County Watershed Mailing List. At the first meeting, Greg Carr offered the use of Sonoma County's landowner mailing list for any area the Task Force would delineate. At this point, the feeling I received from the subsequent discussion was to hold off on doing a large mailing until the Task Force defined the CRMP area.

5. One-on-one meetings. Meeting with individual landowners or groups are planned for the summer period when the Task Force is not meeting. Our

Appendix C

Laguna de Santa Rosa
Coordinated Resource Management and Planning (CRMP)

Task Force Meeting Schedule

1. Wednesday, April 20, 1994, 3:00 -5:00 p.m.
2. Wednesday, May 4, 3:00 - 5:00 p.m.
3. Wednesday, May 18, 3:00 - 5:00 p.m.
4. Wednesday, June 1, 3:00 - 5:00 p.m.

   The above meetings were held at Finley Community Center, 2060 West College Avenue (nr. Stony Point Road), Santa Rosa.

5. Wednesday, July 13, 3:00 - 5:00 p.m.
6. Wednesday, August 3, 3:00 - 5:00 p.m.

   These two meetings held at the Library Forum Room, Sebastopol.

7. Wednesday, Dec. 14, 3:00 - 5:00 p.m. at Utilities Dept., 69 Stony Circle, Santa Rosa
8. Wednesday, April 12, 1995, 3:00 - 5:00 p.m.
9. Wednesday, April 19, 3:00 - 5:00 p.m.

   These two meeting held at the Subregional Wastewater Reclamation System, Laguna Treatment Plant, Santa Rosa.

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Notes from Task Force Meeting, 4/20/94

Welcome/Introductions

Task Force members; Liza Prunuske and Kim Cordell, Prunuske Chatham, Inc., and Jill Arciero, Sonoma State University, facilitators for the Laguna de Santa Rosa Foundation.

Facilitator's Note: We will send out a Task Force list to the members, containing addresses and telephone numbers.

Review of CRMP Process

Facilitator: Before the next meeting, the facilitators will distribute examples of Coordinated Resource Plans done in other areas; and before writing the plan, the Task Force needs to answer:

- What is the *boundary* of the Laguna CRMP?
- What are the *issues and concerns* related to resource management?
- Which *resources* will be addressed in the plan?

-- Various process questions asked by members that should be decided during the process:

- How binding is the plan for those on the Task Force?
- What is consensus?
- How will the plan be signed or ratified in cases of agencies or departments serving an elected body?
- How will this plan be used to guide local decisions, particularly in terms of land use planning?

-- Additional TF member comments:

- It is important to insure that plan recommendations are acceptable to all stakeholders, especially private landowners.
- There is a concern that landowners are not aware of the CRMP. Facilitators need to work with various Task Force members to spread the word about the process.
- CRMP cannot usurp the regulatory/statutory authority of any governmental body.
- The broad representation on the Task Force is likely to provide recommendations that are fairly easy for elected officials to adopt.
- The plan will be important in documenting conditions and issues at the present time.
- The plan needs to help protect this wonderful resource.

happening, but only a small percentage want to become directly involved. Notification and outreach is an ongoing process throughout the CRMP.

- Facilitators should begin making regular press releases to local media about the Task Force meetings.
- Outreach needs to emphasize that the Task Force is not a group to be feared, but rather a caretaker group.
- As far as involvement, the most bang for the buck is where the individuals or agencies are committed to be here every time. Also, the quality of the final product or any ancillary product is directly related to the amount of time we put into it. If the final plan does not adequately reflect my agency, it's nobody's fault but mine. We all have to recognize this, and be willing to commit and work forward--then the product will reflect our effort. We also have to make sure that the opportunity is available for anyone to participate who is willing to make that commitment.
- Would the facilitators delineate on a map the maximum and minimum areas that we are dealing with in the Laguna? *(Yes, maps attached.)*
- The time of meetings creates some exclusivity and makes it impossible for some people to participate that would like to.
- A letter should be sent out to everyone on the mailing list, asking them what time would be best for the meetings.
- Continuity is very important for the Task Force. The same members need to be represented at each meeting to move the process forward. This is not a public hearing-type format.
- Where do we draw the boundary for what we are charged with doing, and the public involvement in it. As a Task Force, we need to roll up our sleeves and produce something for the public to comment on before asking people to tell us things.
- Once the plan is written there will be additional public input during the ratification process.

Facilitator's Note: We will continue to contact individual landowners and work with Task Force members to advise as many as practicable about CRMP. We will make regular press releases to local media. This was acceptable to the Task Force with the reservation that once the Laguna issues are better defined, the subject of notification will again be discussed.

At the end of the above discussion, it was the Task Force decision to proceed with the next three meetings as scheduled, and then re-evaluate how and when additional meetings will be held and noticed. An evening meeting is a possibility.

Liz Parsons, California Native Plant Society, Milo Baker Chapter:
She brought cultivated examples of *Limnanthes Douglasii* (meadowfoam), *Limnanthes vinculans* (rare, Sebastopol meadowfoam, restricted to the Laguna area), and *Downingia concolor* , typical of seasonal wetlands and vernal pools of the Laguna. The CNPS is willing to help the Task Force implement the resource plan. Other CNPS projects include revegetation near Sebastopol and a biotic study of Atascadero-Green Valley Creek.

There are three federally listed endangered plants in the Laguna (all found in vernal pools, and all three present within the Department of Fish and Game's Todd Road Preserve). Taken altogether, there are 20 threatened, rare and endangered (TRE) species identified in the greater Laguna area. Within Sonoma County, there are 106 such species, making it one of the richest reserves of TRE species in California.
Facilitator's Note: For a listing of species found in the Laguna, including TRE species, see "Fish and Wildlife Restoration of the Laguna de Santa Rosa" (aka, "The Bosco Report") that was distributed with your April 20 agenda packet.

-- Does grazing affect these plants?
Grazing is beneficial for some native plants (see the Edwards article), while hurting others (e.g., oak regeneration). It is still a controversial subject among botanists.

Facilitator: We'll save for later a discussion about the ways species are listed as rare and endangered, and the resulting impacts on land use management.

Marco Waaland, Golden Bear Biostudies, 209 DeCoe Street, Santa Rosa 95401 (707/573-1770):
He briefly described the Vernal Pool Preservation Planning Process currently underway and funded by a federal grant to develop a preservation plan that covers the Santa Rosa plain from Rohnert Park to Windsor. One aspect of the study is to identify land management activities that are compatible with vernal pools.

Vernal pools are circular features in Wright and Huichica soils where an impermeable layer causes water to pond at the surface and not infiltrate into the soil. That water can remain there for several months. The vernal pools form a mosaic stretching from the Laguna channel upslope about three miles toward Santa Rosa. They cover about 22 percent of the natural landscape (the rest is covered by valley oak). They provide habitat for resident and migrating waterfowl.

In spring, native annual plants in these pools grow and begin to flower in March and early April. These species follow a progression into the dry season, adding color to the grassland, and a variety of food for wildlife.

An aerial view of vernal pools, from Ludwig Avenue west toward the Laguna channel, shows that they are interconnected. When it rains, water flows from the upper pools, down through the lower ones and eventually into the Laguna. Historic maps prepared by the SCS in the 1930s show the extent of vernal pools on the Santa Rosa plain.

Given what has been lost, the TF is urged to look at the biological resources from a management point of view to conserve what we have left and expand what we can, so as to avoid listing additional species as endangered. Another goal is to look at best management practices (BMPs), such as those that use reclaimed water to treat manure waste.

Facilitator: Additional information about the early history of the Laguna is in Chapter 6, "History, Land Uses and Natural Resources of the Laguna de Santa Rosa" written by Marco Waaland and previously distributed with the April 20 agenda packet.

-- What role does the non-prime habitat have? Is there any value there at all? Just because the land doesn't have endangered species on it, doesn't mean it isn't important. As time goes on, there is less and less non-irrigated, non-intensively used grassland. It's still fairly common in the county; but regionally it's not common. The potential loss of grass upland near the Laguna channel was part of the basis for recent denial of a subdivision in Sebastopol.

-- Have you looked at areas that would be suitable for development?
That is the goal of the Vernal Pool Preservation Plan. They want to prioritize the land in terms of resource values to determine what can be developed and what needs to be preserved.

-- What is the impact of irrigation on the oak trees?
It does have an effect, especially if the irrigation pipes are buried in the root zone. There is much less impact if the irrigation system is moveable. Root rot does increase in saturated soils; and although it doesn't kill the tree outright, it may stress it severely and cause premature death. The Subregional System does manage their irrigation now so that they don't irrigate under the canopy. And they are replanting trees. If irrigation is managed right, it can be compatible with oak trees. However, the oaks are not necessarily a permanent feature. The oaks out in the Laguna area are in an age class of 140 to 180 years old. So regeneration has to go on regularly to replace those old trees.

John Herrick, CNPS Milo Baker Chapter (829-5986).
I would like to discuss some of the management issues that come up in terms of the Native Plant Society. I see five major concerns:
1. Issue of restoration. It is important that the species planted are appropriate to the site, and are from genetic stock collected in the Laguna.
2. The question of exotic pest plants, such as the brooms, ivy, and star thistle, that displace the native plants that have developed over long association with the wildlife.
3. A monitoring program of baseline (current) data and of future revegetation programs. This is important to find out what is successful and what isn't.
4. The Laguna Collection at the Sebastopol Public Library should be encouraged financially and politically so that information about the Laguna is freely available to the general public, as well as those that work in the Laguna.
5. A GIS, or computerized mapping system, is needed to bring information from many sources together so that we can see how various BMPs are working.

individual species and begin taking a broader view of how that species fits into the ecosystem.

Joan Vilms, Sonoma County Fish and Wildlife Advisory Board (and TF member). The Laguna was at one time the second-largest freshwater marsh in coastal Northern California. It is an important stop on the Pacific Flyway, and therefore has statewide, even hemispheric, significance. Currently, approximately 3,000 to 5,000 waterfowl use the Laguna annually. (*Note*: Down significantly from historic numbers--in 1892 a single market hunter killed 6,200 ducks.)

There is a North American Waterfowl Management Plan that is a joint venture of Canada, the US and Mexico, as well as many government agencies and private groups in those countries. The Sonoma County group is doing a number of restoration projects, one of which is in the Laguna. It is an 80-acre site owned by the Department of Fish and Game, half of which is slated for restoration at this time. The project will excavate along the historic Laguna channel, allowing water to be retained later in the season than it is now.

Wetlands, as you know, are a magnet for wildlife. In addition, wildlife needs the cover of brush and various kinds of riparian vegetation. One of the native animals in the Laguna is the badger. **Allan Buckmann**, Dept. of Fish and Game: On the Todd Road Preserve we pulled livestock grazing off to see what would happen. What we got was six different badger colonies, or *setts;* and when we did comparative studies, we found that this concentration is among the highest in the world.
(Joan Vilms continues) This situation highlights a key issue of conflicting "goods". What may be good land use practice for vernal pool plants, may not be good for burrowing owls or badgers. It will be interesting to see when we get into this process how we can plan for maximum diversity. The goal of any biological practice is to increase diversity, just as a smart investor spreads money around to prevent major losses. Biologically, you want to maximize the niches that are occupied in order to maintain maximum flexibility for nature. I hope that will be one of the goals that comes out of this plan: To manage for maximum diversity.

I would also like to mention that one thing that the Fish and Wildlife Advisory Board is doing is to work through the Resource Conservation Districts to help landowners construct livestock control fencing near waterways. Seeing this article on prehistoric grazers (distributed at meeting), it puts existing livestock in a new perspective.

Another important comment concerns non-native plant species. I have never been a fan of eucalyptus, but in the Laguna these tall trees provide heron and egret nesting sites. This is an example of an exotic species that has filled an important niche for native wildlife, and represents the complexity that we have to deal with in coming up with intelligent solutions.

I want to close with two mottoes for conservation planning: "Everything is connected" and "It's best to save all the pieces".

Richard Merriss, representing the Redwood Ornithological Society and Madrone Audubon Society, provided comments about bird surveys along Santa Rosa Creek (copies attached).

Laguna Boundaries

-- A member requested that the boundaries of the Laguna be determined by the TF now. Several members objected to making a final decision until they learned more about the Laguna from future speakers.

Facilitator: distributed a map showing possible configurations. The CRMP guidelines offer general suggestions about choosing the area boundaries:

- They should not be based on political or jurisdictional boundaries;
- They need to be large enough to include all the resources addressed in the plan; but
- The area needs to be small enough so that every landowner feels that his or her actions will make a difference.

-- How did CH2MHill define the Laguna for its study?
They looked at all potentially irrigable lands on the Santa Rosa plain east of the Laguna.

-- What are the political and biological ramifications of the decision? Several people answered that those aren't clear yet. The TF needs more information.

-- The Laguna is an ecosystem and this plan should consider that broader perspective.

-- The Laguna is more than wetlands, and includes uplands, too.

-- Land uses can help define the CRMP area.

-- 100-year floodplain may not be enough.

-- Boundary may be defined by showing where the fragile or significant resources are.

-- Perhaps the TF should look at hydrologically connected units which may go beyond this "greater" Laguna envelope in some areas. This would include vernal pool areas, areas of ponding near Cotati and Rohnert Park, and significant water sources such as Blucher Creek.

-- It is possible to eliminate small-lot residential areas from the CRMP boundaries because landowners have too little area to make meaningful resource management decisions.

-- The goals of the plan will help determine what area needs to be covered.

-- The CRMP is a way to find solutions that will be for everyone's benefit. We should begin thinking of the Laguna as a "phenomenon" rather than a "resource".

Coordinated Resource Management and Planning
Laguna de Santa Rosa

Notes from Task Force Meeting, 5/18/94

Welcome/Introductions

Task Force members (list attached); Presenter: Bill Cox, Dept. of Fish and Game; Facilitators, Liza Prunuske, Kim Cordell & Jill Arciero.

Facilitators: Distributed a copy of the follow-up letter sent to 77 Laguna landowners at the request of the TF. The facilitators will report next meeting about responses.

Water Resources of the Laguna

Bill Cox, Fisheries Biologist, Dept. of Fish and Game (823-1001) gave a slide presentation about the fisheries resource of the Laguna.

This view from Todd Road looking north shows how flat the terrain is, with little water flow. Narrow, braided waterways with few trees are found in this area. There are other areas, especially near Sebastopol, with better cover, deeper pools and cooler temperatures. I've seen pond turtles, steelhead/rainbow trout, mink and black-crowned night herons at the hiking trail bridge. This is one of the best habitats for fish and wildlife. Immediately north of Hwy. 12 there were historically a series of deep lakes. Now summer water depth is about six feet. In the lifetime of current residents there was still enough water in some places between Sebastopol and River Road to run a boat and fish for striped bass. A still-water, slough-type habitat now exists north of Highway 12.

This habitat determines what kind of fish populations are there. It is not a clear, fast-flowing mountain stream, and it is not a broad, fast-moving river like the Russian. It is slow-moving, often stagnant, with high water temperatures (72-78° F. in the summer), high solar exposure and turbidity. There is a high nutrient load from non-point sources, with additional nutrients tied up in the sediment. The frequent algal blooms give the water its characteristic brown-green color. The dissolved oxygen levels often drop below 5 parts per million (ppm) in the summer, which is unacceptable for cold-water fish like salmon and steelhead, but quite all right for other species. There have been recorded 19 species of fish in the Laguna and its tributaries. Ten of those are native, and nine are introduced. The resident species in the main part of the Laguna that live there all year long, three are native and five are introduced.

Freshwater Fishes of California by Samuel M. McGinnis (Calif. Natural History Guides #49, U.C. Press, 1984; County library #597.092 nonfiction) has excellent drawings for fish identification.

where the water is deep. The thing that would benefit fish life most would be a change in water quality. The heavy nutrient loading affects the character of the fish population. I've speculated that if we could go back 75 to 100 years, we probably would see much clearer, cleaner water, and a different fish population. Introduced species, such as carp, have also changed the environment by creating a more turbid waterbody. This suppresses fish like trout and bass who need a clear-water environment.

Facilitator: You have mentioned several management issues: sedimentation, which reduces pool depth, and water quality. Are there any others that should be brought to the attention of the Task Force?
Bill Cox: Yes, we need to improve the physical characteristics: stable banks with structure like logs, and an overhanging cover of trees and shrubs. Unstable, eroding banks and unshaded water are things that degrade the quality of the fish habitat and that of the pond turtle. The turtles, for example, need deep pools, logs for basking, bank cover for privacy and a protected upland area for nest building.

-- Trees in the middle of the channel have diverted water and caused bank erosion.
Bill: I don't really see much of that. Usually the value of the tree sticking out of the water is greater than any erosion it may cause. I'm generally opposed to taking things out of the water to control erosion; I'm more interested in putting things in the water to create structure.

-- Would you recommend the exclusion of livestock?
Bill: Yes, there should be a setback because livestock tends to trample the banks and add manure to the water.
-- How far?
Bill: Enough so that there is a good vegetative cover over the water and the livestock are not going down into the channel. Probably 30-50 feet is desirable; from a biologist's perspective 3 miles would be good, but since we need to consider agriculture, I'll accept what I can get.
-- However, maintaining fences in the floodplain can be very difficult.

Bob Klamt, North Coast Regional Water Quality Control Board, and TF member gave a presentation with handouts.

Page 2: Regulation covers both quantity and quality of permitted discharges (NPDES: National Pollutant Discharge Elimination System).

Enforcement is progressive, starting with staff visits to problem site; if that doesn't work, a clean-up and abatement order is issued, giving formal notice of what needs to be corrected by a specific date; the next level is administrative civil liabilities which goes before the regional board and can result in a considerable fine; a cease and desist order stops all activity.

Page 3: We are charged with preventing pollution that degrades beneficial uses. (*Facilitator's Note*: Beneficial uses for the Laguna are currently listed as

-- What are the main sources?
Bob: Urban runoff, agricultural runoff, and Subregional System wastewater discharge.

-- Where are nutrients concentrated in the Laguna? What are the various forms and how do they affect water quality at different points?
Bob: I can't really answer that at this point, but we will have that kind of information available in a report in the future. Perhaps other speakers will be able to provide additional information.
Facilitator: We will try to get additional information on beneficial uses and level of pollutants in the mail to all TF members.

Scott Stinebaugh, Subregional Wastewater Reclamation System and TF member, made a presentation and distributed a handout.
The city has just released its draft of "Laguna de Santa Rosa Water Quality Objective Attainment Plan" which identifies sources of nitrogen and relative amounts during different flow regimes.
Facilitator's Note: Public comment on the report is due by June 13 (Attn: Dan Carlson, Utilities Dept., 69 Stony Circle, Santa Rosa) should anyone on the TF want to submit comments or questions.

Scott: The mandate of our organization is to collect, treat and dispose of effluent; but we have no control over the quantity entering the system, that is determined in the general plans of each member city. We regulate users of the system to reduce pollutants at their source (example: solvents used by auto dealers on Corby Avenue).

We have two methods of disposal. During the winter we discharge to the Russian River when river flow exceeds 1,000 cubic feet per second (cfs). In the summer we irrigate on farmland throughout the Laguna, from Llano to River Roads. We are also the largest landowner in the Laguna. In effect, we run an irrigation district that uses about half the water we produce each year. Right now, total flow through the Laguna Treatment Plant is about 7 billion gallons a year. Irrigation use can go up to 65% in a dry year, and as low as 25% in a wet year.

We are looking at alternatives to irrigation through demonstration projects. Kelly Wetlands shows the value of using wastewater for habitat restoration; I invite you to visit if you have not yet seen it. Another is a wetlands area adjacent to the Laguna Treatment Plant that is planned for construction. We are also looking at ways to treat dairy waste using wastewater.

I have attached a table at the end of the Executive Summary that compares the levels of various constituents in our wastewater compared to drinking water standards. The one area of exceedance is nitrogen, and we are going to install a process to remove much of that at the treatment plant.

to us is that wetlands can use more water through evapotranspiration than irrigated pasture.

-- Why isn't more land being put under irrigation?
Scott: There aren't any more large parcels left in the Laguna that are suitable for irrigation.

-- What effect will the new nitrate removal system have on winter non-storm levels (about 40% of total load)?
Scott: It should reduce nitrate levels approximately in half to less than 10 (the legal requirement). We already eliminate ammonia, but to reduce nitrate is an entirely different procedure--I don't know of anyone in California who's doing it now. We do need to add some ammonia back, otherwise chlorine disinfection will not work. The city is working on alternatives to disinfection, but none have as yet been approved by the State Dept. of Public Health. We are planning on changing from chlorine sometime in the next 5 to 7 years.

-- What is being done with problem septic systems?
Bob Klamt: I don't know if I fully agree with the city's estimates of loading from septic systems. What we can do is improve existing systems, develop septic maintenance districts, and extent sewer systems; we don't believe in condemning people's homes.

-- Who is responsible for keeping Laguna channel banks devoid of vegetation, especially around Occidental Road?
Bill Cox: Livestock keep trees from regenerating. There is no vegetation removal done by the Sonoma County Water Agency.
-- I understand there is regular clearing by the Agency.
Renee Webber, Sonoma County Water Agengy and TF member**:** There is some removal of vegetation in the channel upstream of Stony Point Road where it has been channelized, and some on tributaries.
-- I know they don't between Llano Road and Sebastopol because I've complained about the vegetation in the channel, and the Agency will not do anything because it is private property and not a maintained flood control channel.
-- There is a recognition that riparian vegetation provides water quality and biological benefits that balance out the small benefit of improved water flow if that vegetation is removed.

The following questions were postponed to the June 1 meeting:
-- Could we get a map of city owned land in the Laguna, and one showing the areas irrigated by wastewater?
-- Would you please supply a map showing the exact point of winter discharge?
-- What is the land use on city owned land?
-- What is the total number of acres irrigated in the Laguna.
-- What kind of leverage do these wastewater contracts give you over private land?

-- To return to the discussion of Kelly Marsh, one point to distinguish is whether the wetland is used to treat the wastewater or whether it is to create habitat. I don't think that the City has ever clearly stated its purpose.

Dave Smith, Merritt Smith Consulting (3732 Mt. Diablo Blvd. Suite 156, Lafayette, CA 94549-3605). The objective of the pilot test is to see what kind of nutrient removal occurs under those wetland conditions. It was not designed to provide all of the possible wetland habitats. It does appear to be pulling out nitrogen, but whether it can do that in the long term will require further evaluation.

-- That is a key question because eventually you may end up with a closed loop with new nutrient uptake only occurring if you harvest the plant material.
Dave: Yes, but first you have to answer the question: is it a permanent or temporary sink; that is, is the nitrogen residing in the sediments or is it denitrifying into the atmosphere? We haven't done that nutrient balance calculation yet, and therefore we can't answer whether or not we need to manage the wetland for nitrogen.

Facilitator: Will there be some kind of summary report on what has been learned from Kelly Marsh, what issues have been resolved and what still needs to be studied?
Dave: Carolyn Dixon can answer many questions about the day-to-day operation of the marsh. My role has been directed a special studies. We have done nutrient monitoring and some study of bio-accumulation of toxics, but nothing has been fully conclusive. The results suggest that before full-scale wetlands using reclaimed water are constructed, additional work needs to be done to make sure there are no fundamental problems. More studies will be scoped out within the next few months as part of the EIR process (for wastewater disposal alternatives). And then, yes, there will be a report that brings everything together in a good summary.

-- How does the Arcata Marsh *(in Humboldt County)* differ from Kelly Marsh?
Dave: The Arcata Marsh receives water that hasn't been treated to the level of the wastewater here. Consequently, there's a much higher level of organics, and it's designed to operate differently. There is wildlife habitat in the post-treatment ponds next to the bay, but the upstream portion was designed for treatment. The problem from an engineer's standpoint is reliability and consistent performance.

-- I've never been to Arcata. Is it fresh water?
Dave: It is adjacent to Humboldt Bay, but it is a managed freshwater marsh. Water flows out of the freshwater area into the bay, but the two do not interact in the wetlands. It is not a tidal system.

-- I think that Arcata is at the point that they are having to harvest their tules in order to get more to grow, because they've reached the limit of how many can grow

The Board of Supervisors has adopted a number of policies that affect the Laguna (highlighted in the copy of the Open Space element given to the TF members).

- One is to protect important open space areas through a scenic resources combining district which is applied to the Laguna area especially along Highway 12. This designation allows for the possibility of transfer of development rights and other strategies to discourage development.
- The second designation is the scenic landscape unit which is directed to preserving the open vistas and oak-studded pasture areas. The Board has also made statements for avoiding inclusion in the sphere of influence of public service districts (including cities) and further encroachment into this area. The transfer and purchase of development rights is recognized for the scenic landscape unit.
- The third designation is scenic corridors along Highway 12, Highway 116, River Road, Gueneville Road, Occidental Road, and Stony Point Road south of Rohnert Park.Expressway. This includes restrictive area setbacks.
- The fourth designation is critical habitat areas, such as wetlands; and is reflected in the zoning ordinance with the biotic resources zoning district, which has been applied to certain areas along the Laguna and places more restrictions on how land can be used. Biotic resource assessments are required for any developments that may occur along the Laguna, and that could include some agricultural uses, although most are exempted from this provision. We have a setback requirement for building permits--50 feet from the edge of a wetland; with a waiver of the setback if it makes a parcel unbuildable, and for certain farm buildings.
- The fifth designation is the riparian corridor. The flat-land riparian corridor establishes a streamside conservation area which is 100 feet from the upper bank. Agricultural operations are allowed in the zone to within 50 feet of the top of bank. There is a prohibition on structures, roads and utility lines within the conservation area. There are criteria for evaluating public projects for general plan consistency within the area.
- Trails designated in the General Plan Open Space element (page 189) include the Joe Rodota Trail (#5), the Santa Rosa Creek Trail (#4), and the Gossage-Hinebaugh Creeks Trail (#6). *(A description from S.R. Creek Master Plan of the reach closest to the Laguna channel was distributed.)*

There are a few things that have been left undone to this point in the implementation section of the Open Space element: complete acquisition of land for trails (this is ongoing); a community separator implementation plan (completion has not yet be authorized because of budget constraints); and a scenic landscape unit visual study that has not yet been done because of the budget.

The Public Safety element cites the 100-year floodplain elevation as the acceptable level of risk and protection for development. The County is required to conduct a comprehensive study of flood hazards along the Laguna and its major tributaries, and coordinate the study with the appropriate cities. There is also a statement (PS-2k) about giving priority to floodplain management over flood control structures.

Michael Murphy, Sonoma County Horse Council and TF member, distributed an article about a trail ride along Santa Rosa Creek and the Laguna. We have excellent relations here in the county among equestrians, bikers and hikers. I am in favor of multiuse trails with communication between all users. For most of the last 10,000 years, the Laguna has not only been a waterway, but a transportation network for the indigenous peoples. We need to restore that use, recognize the natural museum that the Laguna is, and honor the history of the Native Americans here.

I especially want to emphasize that the Open Space policy for riparian corridors allows creekside bikeways and trail (Policy OS-5e); and the Open Space "Policy for Parks and Equestrian & Hiking Trails" (section 4.1) calls for providing enough trails that are convenient to the urban areas. (*Facilitator's Note:* Please refer to your copy of the Open Space element.)

One question that often comes up is about liability for trails use on private land. A bill to limit liability was considered this year in the state legislature, and did not make it out of committee. But I think that it will be considered again in the future, because a lot of land is closed to public access primarily because of liability issues.

At a recent conference on rails to trails, they cited a survey that showed that adjacent property values increased 15% after a trail was completed, and that neighbors who had originally opposed the trail, liked it after construction.

-- I don't see how hikers, kids, and horses are compatible on most trails.
Michael: I serve as a volunteer to help patrol trails at local regional and state parks. I don't see that many problems; it's mainly a matter of education and communication among users.

-- Who's going to construct and maintain the fences that will separate these public access areas from agricultural operations?

Ellen Blinn, Sonoma County Trails Council (575-8448). I think that with the increase of population in Sonoma County, we will need increased public access to natural areas. Currently, Annadel State Park is being loved to death; parts are being run down by heavy use because there are no alternatives.

We have been monitoring the use of the Joe Rodota Trail since it was completed, and are very happy that it has not been the focus for unlawful activities that some people had feared. In fact, some incidents that occurred early on have not been repeated, probably because of increased trail use by the public.

Allan Buckmann, Dept. of Fish and Game and TF member, discussed a large wall map depicting the department's conceptual area acquisition plan in the Laguna. Our priorities are along the channel itself. Current negotiations for sales should bring our land holdings to nearly 600 acres. Other parcels in upland areas are also included so that hydrologic units can be preserved and managed as a whole.

Coordinated Resource Management and Planning
Laguna de Santa Rosa

Notes from Task Force Meeting, 7/13/94

Introductions

Task Force members and alternates (list attached); Guests: Carolyn Dixon; Bob Durrin (FEMA); Dave Smith; Grant Smith; Facilitators, Kim Cordell & Martha Neuman.

Floodplain Management

Andy Lee, Dept. of Water Resources and TF member, showed a video from FEMA (Federal Emergency Management Agency) about the federal flood insurance program. Created in 1968, it provides a carrot and stick approach to encourage local communities to manage floodplain land uses in order to minimize risk to life and property. Following the video, he made the following comments.

- Actual compliance with insurance requirements is quite low, only about 26% of structures in the floodplain are covered.
- Another problem is that often local communities use only minimum requirements to regulate floodplain development. If the base flood elevation (BFE), also known as the 100-year flood level, is set at a certain point, then under the regulations, building can continue in the floodplain up to the point where there is a one-foot rise in the BFE. For people who live in homes that were built just at the BFE, after this rise--or *encroachment*--their first floor will take water in a 100-year flood, not be above that level as they had assumed.
- Another problem is that of impacts. Many communities do not evaluate the upstream and downstream effects of development and channel changes.
- Levees have been built by some communities in order to increase the amount of floodplain that can be developed. This sharply increases the residual risk to these communities should the levees fail.
- Another need in the program is to look at the entire watershed. One community downstream may be very careful in its regulation, but may suffer if those upstream are not so careful.
- There is variability in the way communities are complying with the federal program. Some want flood insurance just so that they can develop their floodplain.
- Current wetlands and environmental regulations sometimes do clash with channel maintenance standards; an example is in the Tia Juana River (*correct spelling*) (See article in *Golden State Floodlight*, Vol. 8, No. 1, distributed by Andy.) Santa Barbara County's approach to the problem is discussed in an article in Vol. 8, No. 2.
- Another problem is that often groups and agencies don't sit down together and discuss problems. What you're doing here is not that common. The main

would have been reduced about four feet. Had the Laguna not been there to take overflow from the cresting Russian River, the peak would have been 61 feet, a difference of nearly 14 feet. This storage effect of the Laguna prolongs flooding in Guerneville while substantially reducing the crest.

-- I'm concerned that development is taking place in the Santa Rosa plains without regard to its potential to increase flooding downstream along the river. Did increased development contribute to 1986 flooding?
Bob Morrison: The handout showing a bar graph of floods of record in the Russian River illustrates the impact of storage on flood peaks. The 1986 flood was not especially severe in Healdsburg, but it was the largest flood ever recorded for Guerneville. The reason is, with the unusual rainfall pattern of that particular storm, the flood crest coming out of the Laguna coincided with the flood crest coming down the Russian River. Under normal storm conditions the Laguna/Mark West flood peak has entered the river and passed by Guerneville considerably ahead of the upper Russian River flood peak which takes a lot longer to reach Guerneville. Therefore, under normal conditions, channels that collect and speed water delivery from the Laguna to the Russian River will help, because that water will flow out to sea before the major crest of the river works its way downstream.

-- At what level does the Russian River begin flowing into the Laguna?
Bob: We really don't have an answer to that because it depends on the relative flows in each one. The stream gage in the Laguna cannot detect direction of flow so we can't detect at what point flows begin to come in from the River. During 1986, no change in flow direction was observed but we have no recorded data to that effect.

• The Water Agency owns land in the Laguna, including a 100-foot-wide right-of-way from River Road to about 100 feet south the lake area upstream of Occidental Road bridge. We don't maintain this section any more, because it wasn't really a flood control project. The pilot channel was constructed to improve drainage and extend the season for farming low lying areas; it was really a reclamation project. There really wasn't much of a defined channel below Occidental Road; it was just a broad wetland and floodplain with considerable sediment deposition each year. It's an area where we have been unable to maintain fences because of prolonged flooding and sedimentation. We are doing channel maintenance upstream of Llano Road in the channels that we own there.

-- Do you permit public access on your right-of-way?
Bob: We have found it's impossible to keep people out, so we've installed low gates that prevent vehicle access while allowing hikers and horses to pass over. The Supervisors used to be concerned with liability, but that hasn't been an issue lately.

-- Do you have a map of the segments that you own?
Bob: I have a large wall map which you can look at in our office.

CRMP Area Boundary

The Task Force discussed the various subcommittees' recommendations for the CRMP area. Generally, the proposals broke out into two areas: one the 100-year floodplain in the Laguna, extending up the tributaries to the urban boundaries; the other, includes the entire area between the urban boundary (and Stony Point Road) on the east, across the Santa Rosa Plain to the undeveloped uplands on the west side of the Laguna. Both proposals end at River Road on the north and Hinebaugh Creek on the south. The advantages to the first area are: it reflects the extent of surface water resources, and being small it is more easily managed. The advantages to the larger area are: it includes other resources such as vernal pools; it involves a bigger human community; and it includes a larger area in which to provide aids and incentives.

The Task Force agreed to use the larger area (map attached) while drafting the goals and objectives at the subcommittee level. The subcommittees will request any changes they feel are necessary in the boundary when they make their final reports to the Task Force.

The next Task Force meeting will be scheduled after all the subcommittees have met and developed draft goals and objectives for their resource issues. probably early October.

Task Force Comments on Planning/Management Objectives

-- Can we change the word "viability" in the agriculture goal to "sustainability"? *After discussion, the wording was not changed, because "sustainable" may put off some potential plan users.*

-- Agriculture should be defined as the production of food and fiber in the plan glossary.

-- Can the planning/management objective related to floodplain management better reflect the goal of integration with biological resource objectives? *The new wording will be: Improve integrated floodplain management.*

-- Does this floodplain objective meet the requirements of FEMA and DWR?
Bob Morrison: I don't think they would have a problem with this goal.

-- Do improved channels and development upstream caused increased flooding downstream? Is it possible that floodplain management in the Laguna would have different goals if seen in the context of the lower Russian River?
Facilitator: These issues can be addressed in the Foundation's report. Wording will also be included in the goal of "coordinating resource management" to say that no implementation project should cause harm to resources outside the CRMP area.

-- The report should recommend the development of a basinwide plan to address the problems of rapid runoff and sedimentation.
Facilitator: We will include the action of coordination outside the CRMP area under the planning/management objective "coordinate resource management." Nearly every subcommittee stressed the need to coordinate decisions with external planning efforts.

Task Force Comments on Implementation Strategy

-- Is there necessarily a conflict between revegetation of riparian corridor and flood carrying capacity?
Bob Morrison: We've been planting trees for the last ten years. It depends on the location, whether it's appropriate or not.

-- In terms of flood channel enhancement, the Santa Rosa Creek Master Plan is an example of improving the resource values of a flood control channel.

-- What will be included in enhancement? Increasing natural resources values: soil permeability, shading, water quality, etc.

Appendix D

Goals Statements/First Meeting

CRMP Task Force Members

1. **Education and Increased Appreciation**
   - fish/wildlife & plants)
   - communities/habitat/ecosystem) natural values; complexity
   - place in watershed & RRiv. system)
   - history/Native American contribution
   - cultural/archaeological resources
   - laws & regulations

2. **Preservation of what is left, permanently; and Expansion/Improvement/Enhancement where it is practical to do so**
   - natural areas/values
     - --all native plants & animals
     - --elimination of need to list additional threatened, rare & endangered species
     - --communities/habitats/ecosystems
   - public health and safety related to
     - --vectors
     - --drinking water
     - --flood hazards
   - recreational use/public access
   - transportation network
   - agriculture
   - water quality
   - floodplain function
   - watershed conditions

3. **Communication**
   - interagency
   - among those working for protection
   - among stakeholders
   - with public
   - between landowners and SCWA/Subregional System
   - cooperation
   - participation

4. **Stewardship**
   - respect for natural processes
   - integration of multiple goals
   - reduction of activities that control or simplify natural systems
   - balance of uses; sustainability
   - balance of development & preservation
   - maintenance of systems

5. **Boundaries**
   - defined; rational
   - fluid; responsive

Appendix E

List of Materials Received by Task Force Members

1. Recruitment letter with enclosures:
   - stamped, addressed reply post card (landowners)
   - summary of process, meeting schedule and registration form (agencies and organizations)
   - previously listed 3 items, plus stakeholders and landowners lists (elected officials)

2. Agenda packet for 4/20/94 meeting (sent to everyone who phoned or wrote that they wanted to participate on the Task Force):
   - memo dated 4/18/94
   - tentative agenda
   - brochure "A Conservation Dilemma: A Cooperative Solution"
   - ground rules from two other CRMP programs
   - "History of Human Use and Modification of the Laguna Ecosystem" by Marco Waaland from *History, Land Use and Natural Resources of the Laguna de Santa Rosa*, 1990.
   - "Fish and Wildlife Restoration of the Laguna de Santa Rosa," 1989 ('The Bosco Report')

3. Handouts at 4/20/94 meeting: Stakeholders' List

4. Agenda packet for 5/4/94 meeting:
   - memo dated 4/26/94
   - tentative agenda
   - notes from 4/20 meeting
   - goals list from 4/20 meeting
   - list of Task Force members (dated 4/26/94)
   - press release (dated 4/26/94)

5. Handouts at 5/4/94 meeting:
   - "Consensus" by John Lavine
   - Appendix B, "Suggested Outline for a Coordinated Resource Management Plan" from *California Coordinated Resource Management and Planning Handbook*, 1990
   - Pescadero-Butano Creek Watershed Coordinated Resource Management Plan
   - "Observations on the Prehistory and Ecology of Grazing in California" by Stephen Edwards from *Fremontia*, 1992
   - Table W1-3, Classification of Wetlands of the Laguna de Santa Rosa from Technical Memorandum W1, Subregional Wastewater Reclamation System
   - Community Outreach Summary (5/3/94)
   - Suggestions for Speakers

10. Agenda Packet for 7/13/94 meeting:
    - tentative agenda and meeting location map
    - notes from 6/1 meeting
    - list of Task Force members
    - map of Subregional System irrigation and discharge locations
    - statistics on irrigation and land use on city of SR reclamation lands
    - TMDL worksheet (8 pp.)
    - portion of Ch. 4, *History, Land Uses and Natural Resources of the Laguna de SR* (1990)
    - Public Safety, Resource Conservation, Agricultural Resources and (part of) Air Transportation elements and related maps, So. Co. General Plan
    - Appropriate Animal Waste Management Guidelines (1992)
    - "Summary of Conclusions," *Laguna Advisory Committee Report* to the city of Sebastopol (Jan. 1988)
    - *Partners for Wildlife* brochure, US Fish and Wildlife Service

11. Handouts at 7/13/94 meeting:
    - *Floodlight*, Vol. 8, Nos. 1-3
    - "Urban Stream Restoration Program," Calif. Dept. of Water Resources
    - Table 2 & p. 433 from *Wetland Creation and Restoration*, J.A. Kusler & M.E. Kentula, Island Press
    - Letter dated 7/11/94 from Robert Klamt, Reg. Water Quality Control Bd.
    - Memo dated 7/13/94 from Cathy Goodwin, RWQCB, & map of water quality monitoring stations
    - *Manure Management*, June/July 1994

12. Agenda Packet for 8/3/94 meeting:
    - meeting notice
    - notes from 7/13/94 meeting
    - Issues and Concerns (7/27/94)
    - Opportunities: Existing Programs and Information Sources (7/27/94)
    - materials from Sonoma Co. Water Agency: excerpts from *Flood Control Design Criteria*, Russian River Stage Data at Gueneville, Russian River Hydrographs for 1955 and 1964, pilot channel location
    - map, Dept. of Water Resources District Boundaries

13. Follow-up from 8/3/94 meeting:
    - memo dated 8/12/94 summarizing subcommittee responsibilities
    - notes from 8/3/94 meeting
    - map, Preliminary CRMP Boundary

Appendix F

Issues and Concerns

Coordinated Resource Management and Planning
Laguna de Santa Rosa

This work-in-progress lists the issues and concerns as they are identified by members of the Task Force and other interested parties.

-- Loss and fragmentation of habitat

- 90% of historic vernal pool areas has been lost
- 92% of the historic riparian forest has been removed
- land use changes within the last 30 years have increased numbers of small residential parcels
- less non-irrigated, non-intensively used grassland
- bank trampling and loss of tree/shrub canopy due to free livestock access

-- Loss of species and reduction of populations

- 3 species are federally listed endangered species and more could be listed in the future
- a small fraction of waterfowl migrate here compared to 100 years ago
- poor valley oak regeneration
- exotic pest plants, introduced fish and feral animals displace native species

-- Loss of diversity

- loss and fragmentation of habitat means there are fewer places for animals to live and less resiliency to disaster
- loss of populations and species means less genetic diversity and more chance of extirpating plants and animals

-- Loss of freedom of choice and discretionary action

- small parcel size reduces choice and the range of management options
- increased regulation reduces freedom of action and increases distrust between public agencies and private landowners
- limited options result in less innovation and fewer cooperative solutions, and diminishes the sense of individual responsibility
- regulations can be vague and poorly or unevenly enforced

-- Need to understand, restore and enhance system complexity

- vernal pools are an interconnected system not isolated units
- future emphasis should be placed on the ecosystem, rather than individual species
- land use practices (such as grazing) that are good for one species (vernal pool plants) can be detrimental for others (badgers)
- landowners need to know how their part fits into the biological whole
- more study is required to see if there are any fundamental problems in using reclaimed water in wetlands
- all restored wetlands should be monitored individually and not managed uniformly

Opportunities: Existing Programs and Information Sources

Coordinated Resource Management and Planning
Laguna de Santa Rosa

This work-in-progress lists opportunities in resource management as they are identified by members of the Task Force and other interested parties.

-- California Native Plant Society; available to help implement plan through
- plant identification
- biotic/habitat studies
- revegetation projects
- non-regulatory

-- Vernal Pool Preservation Planning Process (and Vernal Pool Task Force)
- identify land management activities that are compatible with v.p.
- identify areas of high biological value that should be preserved

-- BMPs
- irrigation management for valley oak protection
- confined animal operations (such as dairies)

-- The Laguna Collection; materials specific to the Laguna de Santa Rosa available at the Sebastopol Regional Library

-- GIS (geographical information system) is a computerized mapping system that can be a powerful tool to integrate and interpret data

-- Rare Plant Fact Sheets available to landowners from the Native Plant Society

-- North American Waterfowl Management Plan: The Sonoma Group (a committee representing public agencies and private organizations) is currently enhancing 40 acres of seasonal marsh and riparian woodland in the Laguna.

-- Sonoma County Fish and Wildlife Advisory Board: working with the resource conservation districts to help landowners construct riparian fencing

-- Wildlife Habitat Relationship System: relates vegetation to wildlife, and can predict impacts of habitat changes on various animals (available from the Department of Fish and Game).

-- Dept. of Fish and Game: developing a management plan for biological resources that will treat each habitat as a whole unit, manage for increased diversity in each habitat, and then relate habitats together to increase ecosystem function and value.

Appendix G

CRMP Participants

Process Coordinator: Laguna de Santa Rosa Foundation
P.O. Box 797
Sebastopol, CA 95473

Funding:
Sonoma County Water Agency
Santa Rosa Subregional Wastewater Reclamation System

Facilitators:
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Martha Neuman, Planner
Liza Prunuske, Principal in Charge
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Jill Arciero, Intern, Institute for Community Planning Assistance,
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Task Force Members:

Brenda Adelman	Russian River Watershed Protection Comm.
Bob Anderson	United Winegrowers of Sonoma County
Fred Beeman	Friends of the Russian River
Phil Bertoli	Gold Ridge Resource Conservation District
Allan Buckmann	Department of Fiah and Game
Maria Cipriani	So. Co. Ag. Preservation & Open Space Dist.
Ginny Collier	Landowner
John Cummings	Natural Resources Consultant
Charles Dill	Marin-Sonoma Mosquito Abatement Dist.
Karen Gaffney	Sotoyome-Santa Rosa Resource Cons. Dist. & Circuit Rider Productions, Inc.
Isadore Fomasi (deceased)	Landowner
Jerry Hlavac	Landowner
Earl Holtz	Western United Dairymen
Richard King/Gene Guenza	Natural Resources (Soil) Conservation Service
Robert Klamt/Cecile Morris	Regional Water Quality Control Board
John Kottage	Sonoma Co. Dept. of Trans. & Public Works
Michael Kyes	Sebastopol Chamber of Commerce
Andrew Lee/I-Ming Cheng	Department of Water Resource
Sarah McNair	City of Cotati
Richard Merriss	Redwood Ornithological Society & Madrone Audubon Society
Bob Morrison/Renee Webber	Sonoma County Water Agency

Appendix H

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IV. Sources of Monitoring Data:

1. Calif. Department of Fish and Game -- periodic, focused studies.
2. Circuit Rider Productions -- revegetation/survival data.
3. City of Santa Rosa and Sonoma County -- stormwater management; vernal pool surveys.
4. Laguna de Santa Rosa Foundation -- revegetation/survival data.
5. Madrone Audubon & Redwood Ornithological Society -- annual bird count; heron-egret rookeries.
6. Marin-Sonoma Mosquito Abatement District -- vector surveys.
7. North Coast Regional Water Quality Control Board -- water quality (biweekly); discharge-season receiving waters monitoring; one-time only sample of complex organic chemicals and heavy metals (1995); periodic aerial photos.
8. Rancho Cotate High School -- water quality and riparian vegetation, Copeland Ck.
9. Sonoma County Agricultural Commissioner -- use of agricultural chemicals.
10. Sonoma County Farm Bureau -- GIS-compatible database showing changes in agricultural lands.
11. Sonoma County Water Agency -- flood-flow events.
12. Subregional Wastewater Reclamation System (City of Santa Rosa) -- water quality; tree planting/survival; discharge-season flow rates; periodic wildlife and plant surveys; annual bird count; fish migration study; and other specific monitoring as directed by regulatory agencies.
13. U.S. Fish & Wildlife Service -- breeding bird survey (covering the area from Mark West Lodge to Bloomfield); annually, 25 years.